

Claims

1. Use of a nucleic acid containing a sequence selected from the group consisting of SEQ ID NO:1, a fragment or derivative thereof, SEQ ID NO:2, a fragment or derivative thereof, SEQ ID NO:6, a fragment or derivative thereof, and SEQ ID NO:7, a fragment or derivative thereof, to prepare siRNA which sensitizes therapy-resistant tumor cells for apoptosis.
2. Use of a nucleic acid containing the sequence of SEQ ID NO:1, a fragment or derivative thereof, or SEQ ID NO:2, a fragment or derivative thereof, to prepare siRNA which sensitizes therapy-resistant tumor cells for apoptosis.
3. The use according to claim 1 or 2, wherein said nucleic acid has a length of 15 to 25 nucleotides, preferably 18 to 22 nucleotides and most preferably 19 nucleotides.
4. The use according to any of claims 1 to 3, wherein the siRNA is delivered into a therapy-resistant tumor cell.
5. The use according to claim 4, wherein the delivery is done by using liposomes or hydrodynamic injection.
6. Use of a nucleic acid containing a sequence selected from the group consisting of SEQ ID NO:3, a fragment or derivative thereof, SEQ ID NO:4, a fragment or derivative thereof, SEQ ID NO:8, a fragment or derivative thereof, and SEQ ID NO:9, a fragment or derivative thereof, to prepare siRNA which sensitizes therapy-resistant tumor cells for apoptosis.
7. Use of a nucleic acid containing the sequence of SEQ ID NO:3, a fragment or derivative thereof, or SEQ ID NO:4, to prepare siRNA which sensitizes therapy-resistant tumor cells for apoptosis.
8. The use according to claim 6 or 7, wherein the nucleic acid is inserted into an expression vector.
9. The use according to claim 8, wherein the expression vector allows for the production of dsRNA.

10. The use according to claim 8 or 9, wherein the expression vector is pSUPER.
11. An expression vector containing the sequence of SEQ ID NOs:3, a fragment or derivative thereof, SEQ ID NO:4, a fragment or derivative thereof, SEQ ID NO:8, a fragment or derivative thereof, or SEQ ID NO:9, a fragment or derivative thereof.
12. A method for down-regulating livin in a therapy-resistant tumor cell comprising contacting the cell with a siRNA containing the sequence of SEQ ID NOs: 1, 2, 3, 4, 6, 7, 8 and/or 9.
13. A siRNA containing the sequence of SEQ ID NO:1, 2, 3, 4, 6, 7, 8 or 9 for use as a pharmaceutical for the treatment of therapy-resistant tumors.
14. The siRNA according to claim 13, wherein the siRNA is used in combination with radiation therapy.
15. The siRNA according to claim 13, wherein the siRNA is used in combination with an active compound which is selected from the group consisting of cytostatic compounds, death receptor ligands, antibodies to death receptors and negative regulators of anti-apoptotic proteins.
16. Use of a siRNA containing the sequence of SEQ ID NO:1, 2, 3, 4, 6, 7, 8 or 9 for the manufacture of a medicament for the treatment of therapy-resistant tumors.
17. The use according to claim 16, wherein the therapy-resistant tumor is selected from the group consisting of neuroblastoma, intestine carcinoma preferably rectum carcinoma, colon carcinoma, familial adenomatous polyposis carcinoma and hereditary non-polyposis colorectal cancer, esophageal carcinoma, labial carcinoma, larynx carcinoma, hypopharynx carcinoma, tong carcinoma, salivary gland carcinoma, gastric carcinoma, adenocarcinoma, medullary thyroid carcinoma, papillary thyroid carcinoma, follicular thyroid carcinoma, anaplastic thyroid carcinoma, renal carcinoma, kidney parenchym carcinoma, ovarian carcinoma, cervix carcinoma, uterine corpus carcinoma, endometrium carcinoma, chorion carcinoma, pancreatic carcinoma, prostate carcinoma, testis carcinoma, breast carcinoma, urinary carcinoma, melanoma, brain tumors preferably glioblastoma,

astrocytoma, meningioma, medulloblastoma and peripheral neuroectodermal tumors, Hodgkin lymphoma, non-Hodgkin lymphoma, Burkitt lymphoma, acute lymphatic leukemia (ALL), chronic lymphatic leukemia (CLL), acute myeloid leukemia (AML), chronic myeloid leukemia (CML), adult T-cell leukemia lymphoma, hepatocellular carcinoma, gall bladder carcinoma, bronchial carcinoma, small cell lung carcinoma, non-small cell lung carcinoma, multiple myeloma, basalioma, teratoma, retinoblastoma, choroidea melanoma, seminoma, rhabdomyosarcoma, craniopharyngeoma, osteosarcoma, chondrosarcoma, myosarcoma, liposarcoma, fibrosarcoma, Ewing sarcoma and plasmacytoma.

18. The use according to claims 16 or 17, wherein the therapy-resistant tumor is cervical carcinoma or melanoma.
19. A medicament for the treatment of therapy-resistant tumors comprising a siRNA containing the sequence of SEQ ID NOs:1, 2, 3, 4, 6, 7, 8 or 9 a pharmaceutically acceptable carrier and, optionally, an active compound.